



SCOTIABANK'S EMISSIONS REDUCTION TARGET IN THE AUTOMOTIVE SECTOR

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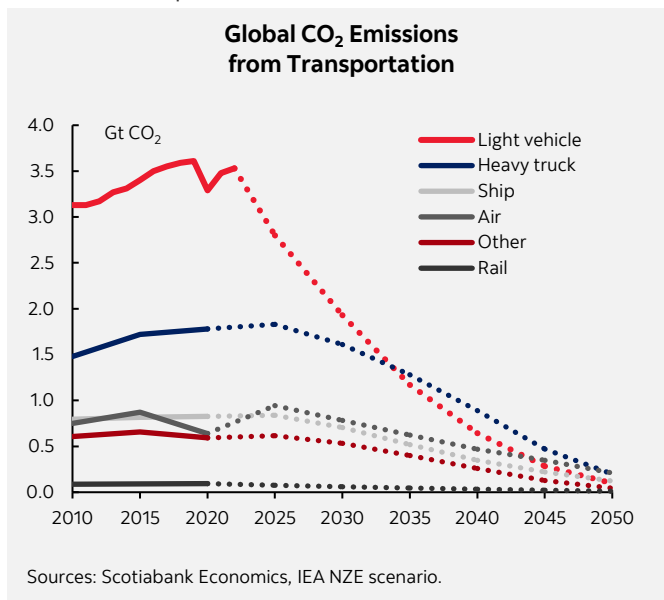


INTRODUCTION

Scotiabank¹ has developed an enterprise-wide climate strategy that articulates the Bank's approach to addressing climate risks and opportunities. A foundation of Scotiabank's climate strategy is our goal to achieve net-zero in our financed emissions by 2050.

In October 2021, Scotiabank became a signatory to UNEP FI's Net Zero Banking Alliance (“**NZBA**”). Scotiabank's 2022 Net Zero Pathways Report sets out interim financed emission reduction targets for the Oil and Gas and the Power and Utilities sectors. This document provides an overview of Scotiabank's third financed emission reduction target pertaining to the Automotive Sector² (the “**Auto Target**”). The Auto Target includes business loans to automotive manufacturers (“**Auto OEMs**”) of light-duty vehicles³ (“**LDVs**”), and/or the wholly-owned subsidiary of the Auto OEMs that provide financing to wholesale and retail customers (“**Captive Finance Companies**” or “**CFCs**”) ⁴.

The Bank is committed to disclosing progress towards its financed emission reduction targets and outlining the ways we support efforts to transition to a net-zero economy. Scotiabank will continue to set financed emissions targets in accordance with our objectives to reduce our financed emissions in priority sectors, as the data quality in those sectors improves.



¹“Scotiabank” is a reference to, and is used interchangeably with, The Bank of Nova Scotia and its subsidiaries. “We”, “our” and “the Bank” refers to The Bank of Nova Scotia and its subsidiaries, operating as Scotiabank.

² For the purpose of this document, the Automotive Sector is understood as including Auto OEMs and their Captive Finance Companies, as defined herein.

³ For the purpose of this document, light-duty vehicles are defined as passenger vehicles and light-commercial vehicles (Class 1-3).

⁴ A Captive Finance Company is a wholly owned subsidiary of an Auto OEM that provides financing to consumers for the purchase or lease of the Auto OEM's products. Captive Finance Companies make up the majority of our borrowers either as the primary borrower or co-borrower with the Auto OEM.”



Why An Auto Target?

The transportation sector is responsible for more than 20% of global emissions; 50% of those emissions are attributable to LDVs⁵. Transitioning from internal combustion engine vehicles (“ICEVs”) to electric vehicles (“EVs”) will be a priority for Auto OEMs in achieving their net-zero emissions targets⁶. Auto OEMs are identifying available and scalable solutions, including improving fuel efficiency of ICEVs, and increasing production of EVs, such as hybrid electric and battery electric vehicles (“BEVs”)⁵. The International Energy Agency (“IEA”) reported that production of low-emission vehicles globally is at an all-time high, and that EV sales have increased as a proportion of total sales⁷.

MEASURING FINANCED EMISSIONS RELATING TO THE AUTOMOTIVE SECTOR

Banks use several metrics to understand their contribution to their clients' emissions. One such metric is absolute emissions, which measures those emissions banks and investors finance through their loans and investments. Using industry-adopted methodologies outlined in the Global Greenhouse House Gas Accounting and Reporting Standard⁸, Scotiabank calculated an absolute emissions baseline of its Auto OEMs and their CFCs using credit drawn from authorized credit facilities (“**Outstanding**”) and reported client emissions (See Figure A, below).

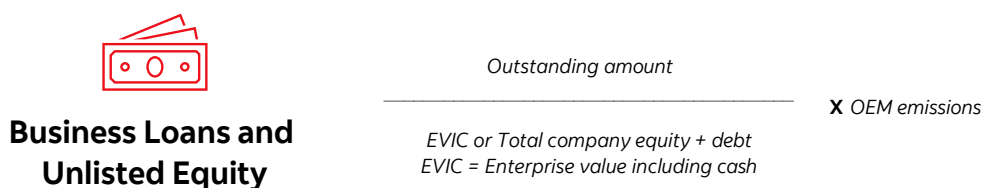


Figure A. [Partnership for Carbon Accounting Financials](#) methodology for calculating absolute emissions relating to Business Loans and Unlisted Equity

⁵ [International Energy Agency \(IEA\). 2021. Net Zero by 2050 – A Roadmap for the Global Energy Sector.](#)

⁶ [IEA \(2023\), Global EV Outlook 2023, IEA, Paris, License: CC BY 4.0.](#)

⁷ [IEA \(2023\), Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach, IEA, Paris, License: CC BY 4.0.](#)

⁸ Published by the [Partnership for Carbon Accounting Financials](#), a global partnership of financial institutions that work together to develop and implement a harmonized approach to assess and disclose the greenhouse gas (GHG) emissions associated with their loans and investments.



YEAR	Financial exposure: AUTHORIZED	Financial exposure: OUTSTANDING
2019	\$5.7B	\$2.0B
2020	\$5.7B	\$2.3B

Figure B. Automotive sector financial exposure in fiscal year 2019 and 2020

AUTO TARGET-SETTING METHODOLOGY

Another way to understand the relationship between a bank’s lending and investing activities and its clients’ emissions is to measure emissions intensity, a metric that measures emissions per unit of production⁹. Following the same approach taken in setting emissions reduction targets for the Oil and Gas and Power and Utilities sectors, Scotiabank is using a physical emission intensity metric - CO₂ equivalent per vehicle kilometer – for its Auto Target. Using a physical emissions intensity metric allows for comparability of emissions reduction targets across financial institutions and portfolios, and for managing climate transition risks¹⁰.

Scotiabank calculated a physical emission intensity baseline for its Auto OEMs and their CFCs using total available credit facilities (“**Authorized**”) and a weighted average based on financing to clients¹¹ (See Figure C, below).

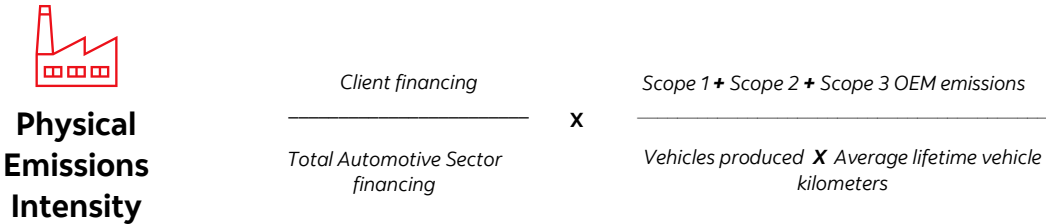


Figure C. Methodology used for calculating physical emissions intensity

⁹ [Scotiabank’s Net Zero Pathways Report](#) – Glossary.
¹⁰ [Partnership for Carbon Accounting Financials](#) in The Global GHG Accounting and Reporting Standard Part A: Financed Emissions. Second Edition. 2022 (The Global Standard, Part A).
¹¹ Scotiabank, like several other global banks, has adopted a modified method for calculating and tracking financed emissions intensity in our Automotive portfolio to reduce volatility caused by factors besides changes in actual emissions. [See Scotiabank’s Net Zero Pathways Report.](#)



Emissions Data Sources

To calculate absolute emissions and physical emissions intensity, Scotiabank used client emissions data¹² from the following sources.

DATA SOURCE	AUTO OEM DATA POINTS
S&P Global TruCost	<ul style="list-style-type: none"> Emissions data Enterprise Value Including Cash ("EVIC")
S&P Mobility	<ul style="list-style-type: none"> Production data




	SCOPE 1	<ul style="list-style-type: none"> Production of vehicles Manufacturing EV batteries
	SCOPE 2	<ul style="list-style-type: none"> Purchased electricity for plants and for charging infrastructure
	SCOPE 3	<ul style="list-style-type: none"> Tank-to-wheel emissions

Figure D. Common emission sources from the Automotive Sector¹³

¹² Auto OEM emissions data is reported globally at the parent-level.

¹³ [IEA NZE 2050; Total CO₂-equivalent Life-cycle Emissions from Commercially Available Passenger Cars.](#)

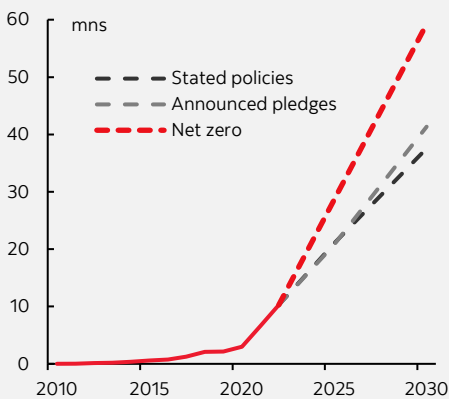


Scope 3 Emissions

Direct (Scope 1) and indirect emissions (Scope 2 and 3) data is readily available for the clients included in the Auto Target. Due to the different methodologies used by Auto OEMs to calculate Scope 3 emissions, it was necessary to rely on external sources for Auto OEMs' Scope 3 emissions. Scope 3 emissions account for over 90% of our clients' reported emissions.¹⁴ Our Auto Target includes Scope 3 tank-to-wheel ("TTW") related emissions, often referred to as tailpipe emissions.

Government action that supports decarbonization in the automotive sector

Global Electric Vehicle Sales



Sources: Scotiabank Economics, IEA.

While Auto OEMs sell vehicles globally, the majority of vehicles sold by CFCs will be sold in Canada, the United States, and Mexico. These three countries each have policy frameworks or regulations that broadly align to the objectives of the Auto Target and support the global transition to electric vehicles for LDVs. For example, the Government of Canada is committing to a mandatory 100% zero-emission vehicle sales target by 2035 for all new LDVs¹⁵, the United States Environmental Protection Agency released a finalized rule for fuel economy standards to reduce GHG emissions between 5% and 10% for LDVs in model years 2023-2026¹⁶ and Mexico has a goal of producing 50% zero-emission LDVs by 2030¹⁷.

[Explore the International Energy Agency's Global EV Policy Explorer for more information.](#)

¹⁵[Canada's Zero-Emission Vehicle \(ZEV\) sales targets.](#)

¹⁶[Corporate Average Fuel Economy Standards for Model Years 2024-2026 Passenger Cars and Light Trucks.](#)

¹⁷[Government of Mexico on Energy and Climate Action.](#)



SELECTING A PATHWAY FOR THE AUTO TARGET

To set the Auto Target, we used the International Energy Agency Net Zero by 2050 Pathway (the “**IEA NZE Pathway**”) and its key assumptions as they relate to the automotive sector (see Figure E, below).

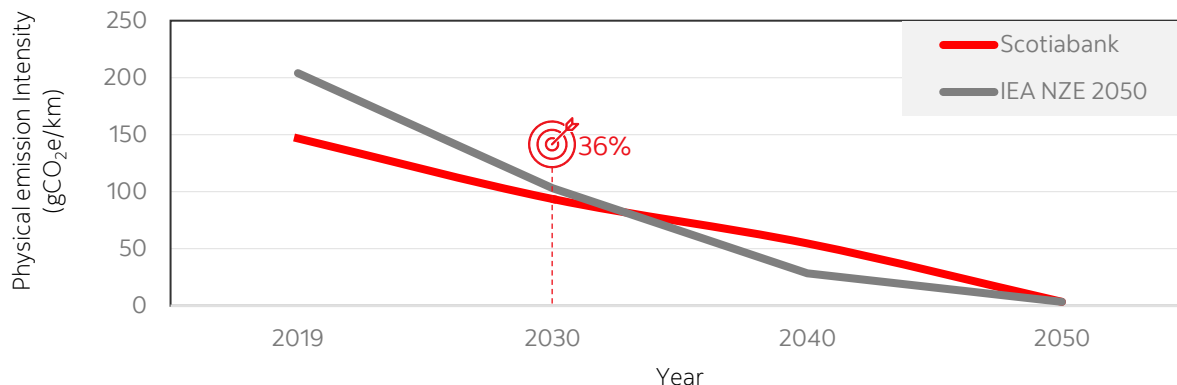
IEA NZE	Pathway Components ¹⁸
Temperature Ambition	1.5 degrees Celsius (science-based)
Net Zero target year	2050
Regional Coverage	Global
Key assumptions of the pathway	<ul style="list-style-type: none"> • Net-zero in the Power sector by 2040 globally and by 2035 in advanced economies • Phase out unabated coal in advanced economies by 2030 • 90% of global electricity generation in 2050 comes from renewable sources, with solar PV plus wind accounting for ~ 70% • All new buildings are zero-carbon-ready by 2030
Key assumptions pertaining to the Automotive Sector	<ul style="list-style-type: none"> • Sales of new internal combustion engine passenger cars halted by 2035 • Sales of battery electric vehicles will increase to 50% of new sales in emerging economies and 75% in developed economies by 2030 • 80% of vehicles on the road will be combustion engines in 2030 but fuel efficiency of these vehicles will increase by 30% by 2035

Figure E. Features of the International Energy Agency Net Zero by 2050 Pathway

¹⁸ [Scotiabank's Net Zero Pathways Report](#) – Glossary.



According to the IEA NZE Pathway, electric LDVs will make up 75% of all new vehicles sold in developed markets, and approximately 50% of new vehicles sold in emerging markets, by 2030¹⁹. The IEA NZE has stated that 80% of all LDVs on the road in 2030 will be ICEV. For new LDVs sold globally, 50% will be hybrid electric and fuel cell electric.



Informed by the [Sectoral Decarbonization Approach](#)²⁰ and the IEA NZE Pathway, Scotiabank’s Auto Target is a commitment to reduce our Auto OEMs’ grams of CO₂e per vehicle kilometer driven to 93gCO₂e/km, a 36% emissions reduction by 2030 as compared to a baseline of 147 gCO₂e/km in 2019.

YEAR	FINANCED EMISSIONS				PHYSICAL INTENSITY (gCO ₂ e/Km)
	Scope 1 (MtEqCO ₂)	Scope 2 (MtEqCO ₂)	TTW Scope 3 (MtEqCO ₂)	Data Quality Score	
2019 BASELINE²¹	0.02	0.03	1.8	2.0	146.7
2020	0.02	0.03	2.1	2.0	188.9 ²²

Figure F. Net-zero financed emissions table

¹⁹ [International Energy Agency \(IEA\). 2021. Net Zero by 2050 – A Roadmap for the Global Energy Sector.](#)

²⁰ The [Sectoral Decarbonization Approach](#) is a scientifically-informed method for companies to set emissions reduction targets.

²¹ A 2019 as a baseline was selected because 2020 and 2021 were affected by COVID-19 pandemic and the impacts of this macro-economic context.

²² Scotiabank’s physical emission intensity relating to OEM clients is higher in 2020 than in 2019 because OEMs reported significant decreases in vehicle production, while emissions stayed relatively static; this led to emissions per vehicle produced increasing in 2020. See Figure C.



FACTORS INFLUENCING DECARBONIZATION IN THE AUTOMOTIVE SECTOR

Ultimately, decarbonization requires collaboration and support among business, government, and consumers²³. Emissions reductions in the automotive sector, through the adoption of low emission LDVs, may be bolstered by the following:

- Expansion and decarbonization of electricity grids to reduce OEM Scope 1, 2 and 3 emissions²³
- Increased public electric charging infrastructure to support commercial and consumer decisions to purchase low emission LDVs²⁴
- Fuel efficiency standards and regulations (see call-out box Regulatory) to reduce emissions of non-electric vehicles²⁴
- Consumer demand for EVs
- Establishment of a stable policy environment that serve to anchor strategic decisions of OEMs relating to EV production²⁴
- Investments in research and development to improve batteries²⁴

Scotiabank recognizes that it has a role in the sector to mobilize capital to support our clients in achieving their net-zero targets. We are committed to the following activities across our lending portfolios:

- Engage with clients to provide financing and services such as syndicated and bilateral loans, to advance their respective emission reduction targets
- Portfolio management to increase financing to companies well-aligned with our net-zero commitments

CLIENT ENGAGEMENT

Scotiabank engages with OEM clients on the challenges and opportunities they face in the transition to decarbonize and increase EV production. Challenges we heard included the sheer cost and scale required for the EV transition. This financial barrier spans the auto value chain, including upstream suppliers' cost inflation, specifically the cost of critical minerals and battery-related materials, the cost of developing charging infrastructure, and consumer adoption of EVs due to the higher upfront cost. Lack of EV charging infrastructure in turn has an impact on demand, given consumers are concerned about availability. The industry has found innovative ways of tackling the problem, for example, the recently announced joint venture between seven OEMs that will significantly expand access to high-powered charging in North America. Another challenge is the scarcity of the critical minerals necessary for the widescale manufacturing of batteries to operate EVs. Some OEMs are addressing this challenge through the creation of joint ventures or ownership of battery plants or processing facilities for critical minerals.

²³ [IEA \(2022\), World Energy Outlook 2022, IEA, Paris, License: CC BY 4.0 \(report\); CC BY NC SA 4.0 \(Annex A\).](#)

²⁴ [IEA \(2023\), Global EV Outlook 2023, IEA, Paris, License: CC BY 4.0.](#)



As discovered during client meetings (see Client Engagement above), Auto OEMs face certain barriers to achieving their net-zero targets, such as consumer adoption of EVs. Scotiabank can indirectly support its clients in addressing these barriers through the following actions:

- Support community efforts focused on decarbonization in the Automotive Sector. For example, Scotiabank's existing [Plug'n Drive](#) not-for-profit "Electrifying sponsorship" to support consumer engagement at the Electric Vehicle Discovery Centre and the Mobile EV Education Trailer
- Manage EV Connect charging sites at Scotiabank's branch locations, and continue with additional charging station deployment
- Offer incentives and EV financing programs such as ["Auto loans" with special pricing on eligible electric vehicles](#) for Scotiabank's employees and customers
- Produce economic research and thought leadership to drive awareness and address challenges to decarbonizing the sector

Insights and Views: Electric Vehicle Demand

As part of Scotiabank's commitment to research and thought leadership, ScotiaEconomics investigated the key challenges facing EV adoption in Canada, the United States and Mexico:

- Fundamental shifts in the policy landscape, along with pent-up demand and high energy prices, have underpinned a surge in global EV sales.
- Spending on EVs was up 50% last year alone. Near-exponential growth of EV sales—up 240% since the onset of the pandemic—looks set to continue.
- EV Sales should grow 25% annually on a path to net zero. However, EVs likely need to be a fraction of today's prices to reach mass market by 2035.
- Automakers' (and their supply chains) ability to respond to electrification demands may be constrained by consumer demand, price, and policy uncertainty, while opening the door to imports from markets that are years' ahead.

Read the full report here:

[A Luxury We Cannot Afford to Squander: North America Needs to Back Radically Cheaper Electric Vehicles](#)



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By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our financial performance and ESG-related objectives, vision, strategic goals and targets will not be achieved. We caution readers not to place undue reliance on these statements as a number of risk factors, many of which are beyond our control and effects of which can be difficult to predict, could cause our actual results to differ materially from the expectations, targets, estimates or intentions expressed in such forward-looking statements. The continuing development and evolution of the legal and regulatory environmental relating to ESG issues, and GHG and climate related issues in particular, may result in updates or revisions to these statements in the future. Other factors that may require changes to these statements, or impact actual results, include changes in methodologies, standards, scenarios or frameworks, the availability and quality of data, compliance by third parties with our policies and procedures, our ability to implement initiatives on our expected timeline, assumptions regarding the use of carbon and renewable energy credits or other transition mechanisms and technological, economic, scientific, legal or policy developments.



In addition, as we work to advance our sustainable finance and climate commitments, goals and targets, external factors outside of our reasonable control may act as constraints on their achievement, including varying decarbonization efforts across economies, the need for thoughtful climate policies around the world, more and better data, reasonably supported methodologies, technological advancements, the evolution of consumer behaviour the challenges of balancing interim emission reduction targets with an orderly and just transition, and geopolitical factors that impact global energy needs, and other significant considerations such as legal and regulatory obligations.

The future outcomes that relate to forward-looking statements may be influenced by many factors, including but not limited to: general economic and market conditions in the countries in which we operate and globally; changes in currency and interest rates; increased funding costs and market volatility due to market illiquidity and competition for funding; the failure of third parties to comply with their obligations to the Bank and its affiliates; changes in monetary, fiscal, or economic policy and tax legislation and interpretation; changes in laws and regulations or in supervisory expectations or requirements, including capital, interest rate and liquidity requirements and guidance, and the effect of such changes on funding costs; geopolitical risk; changes to our credit ratings; the possible effects on our business of war or terrorist actions and unforeseen consequences arising from such actions; technological changes and technology resiliency; operational and infrastructure risks; reputational risks; the accuracy and completeness of information the Bank receives on customers and counterparties; the timely development and introduction of new products and services, and the extent to which products or services previously sold by the Bank require the Bank to incur liabilities or absorb losses not contemplated at their origination; our ability to execute our strategic plans, including the successful completion of acquisitions and dispositions, including obtaining regulatory approvals; critical accounting estimates and the effect of changes to accounting standards, rules and interpretations on these estimates; global capital markets activity; the Bank's ability to attract, develop and retain key executives; the evolution of various types of fraud or other criminal behaviour to which the Bank is exposed; anti-money laundering; disruptions or attacks (including cyber-attacks) on the Bank's information technology, internet connectivity, network accessibility, or other voice or data communications systems or services, which may result in data breaches, unauthorized access to sensitive information, and potential incidents of identity theft; increased competition in the geographic and in business areas in which we operate, including through internet and mobile banking and nontraditional competitors; exposure related to significant litigation and regulatory matters; climate change and other environmental and social risks, including sustainability that may arise, including from the Bank's business activities; the occurrence of natural and unnatural catastrophic events and claims resulting from such events; inflationary pressures; Canadian housing and household indebtedness; the emergence or continuation of widespread health emergencies or pandemics, including their impact on the global economy, financial market conditions and the Bank's business, results of operations, financial condition and prospects; and the Bank's anticipation of and success in managing the risks implied by the foregoing. A substantial amount of the Bank's business involves making loans or otherwise committing resources to specific companies, industries or countries. Unforeseen events affecting such borrowers, industries or countries could have a material adverse effect on the Bank's financial results, businesses, financial condition or liquidity. These and other factors may cause the Bank's actual performance to differ materially from that contemplated by forward-looking statements. The Bank cautions that the preceding list is not exhaustive of all possible risk factors and other factors could also adversely affect the Bank's results, for more information, please see the "Risk Management" section of the Bank's 2022 Annual Report, as may be updated by quarterly reports. Readers should consider the above-noted factors when reviewing these sections. When relying on forward-looking statements to make decisions with respect to the Bank and its securities, investors and others should carefully consider the preceding factors, other uncertainties and potential events. Any forward-looking statements contained in this document represent the views of management only as of the date hereof and are presented for the purpose of assisting the Bank's shareholders and analysts in understanding the Bank's financial position, objectives and priorities, and anticipated financial performance as at and for the periods ended on the dates presented and may not be appropriate for other purposes. Except as required by law, the Bank does not undertake to update any forward-looking statements, whether written or oral, that may be made from time to time by or on its behalf. Additional information relating to the Bank, including the Bank's Annual Information Form and 2022 Annual Report, can be located on the SEDAR+ website at www.sedarplus.ca and on the EDGAR section of the SEC's website at <http://www.sec.gov>.

